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## THE COMETS OF THE YEAR 1902.

The year that has just closed will not be remembered as a remarkable one in the annals of cometary discovery, though PERRINE'S comet (1902 *b*) proved to be the brightest one of recent years. Several periodic comets returned to the neighborhood of the Sun during the year, but all of them escaped detection, though they were searched for carefully, both visually and photographically. The four comets recorded were all unexpected ones, and two of them have added nothing to our knowledge of these bodies.

Comet *a*, discovered by Dr. BROOKS on April 14, 1902, was not announced until confirmed on the following night. Observations of it were secured at various stations in this country and in Europe on the nights of April 16th, 17th, 18th, and 19th; but, so far as I know, no one has seen it since then. Cloudy weather prevented observations here after April 16th, though the comet was seen for a few moments on the 17th. It was a morning object when discovered and was rapidly approaching the Sun, and its orbit was such that its apparent position in the heavens was very near that of the Sun for several months. After passing the Sun, the comet was looked for here in the positions predicted by the parabolic elements, and in those derived from LEUSCHNER's short-period ellipse, but it was not seen.

Comet *b*, discovered by PERRINE in the early morning of September 1, 1902, has been described at length in Nos. 86 and 87 of these *Publications*. The last observation secured here before the comet passed the Sun was made on November 17th. At present it is too far south to be observed from stations in the northern hemisphere, but it will again be in reach by the middle of February, and, if it is as bright as theory predicts, it should be for several months an easy object to observe.

It was announced in the *Astronomische Nachrichten*, and in the *Monthly Notices*, R. A. S., in September that Mr. JOHN GRIGG, of Thames, New Zealand, had discovered a faint comet on the 22d of July. Mr. GRIGG's letter states that he secured approximate measures of the comet's position on the nights of July 23d, 26th, 29th, and August 1st and 2d. Since then he has not seen it, and so far no evidence is at hand that it has been seen by any one else. Dr. KREUTZ communicated an ephemeris

based on approximate elements computed by Mr. GRIGG, and the comet was looked for here on several nights without success. This object has been designated Comet *c* 1902.

The last comet of the year was discovered by M. GIACOBINI at Nice on December 2, 1902. The telegram announcing discovery reached us on December 4th, but clouds prevented observations until the following night. Since then measures have been made on a number of nights, the last being secured on January 7th. The comet is very small,—only 2' or 3' in diameter,—and quite faint, but possesses a well-defined nucleus of about the same brightness as a  $13\frac{1}{2}$ -magnitude star. Its apparent motion is very slow, for it is still several months distant from perihelion, and only half a dozen known comets have a perihelion distance as great as that assigned to this one by the preliminary elements. For this reason it is not likely to be at all conspicuous, even when observed with a good telescope; but, from the situation of its apparent path through the sky, it is probable that its motion can be observed for a long time and data secured for an accurate orbit.

R. G. ARTKEN.

Jan. 10, 1903.

#### THE SPECTRUM OF THE FAINT NEBULOSITY AROUND *Nova Persei*.\*

The anomalous changes which have been observed in the faint nebulosity surrounding *Nova Persei* made it highly desirable to obtain as great a variety of evidence as possible, particularly in the way of physical observations. In March, 1902, observations were secured with the Crossley reflector tending to show that there was little or no polarization in the light from the brightest of the condensations then visible.

The nebulosity was too faint to attempt any spectroscopic observations with the apparatus available. A slit-spectrograph having a quartz prism and quartz lenses was designed especially for this problem, to be used in connection with the Crossley reflector. The dispersion was purposely made very small.

A negative was secured on the nights of October 31st and November 1st, 2d, and 4th, with a total exposure of over 34 hours.

\* Abstract of L. O. *Bulletin*, No. —.